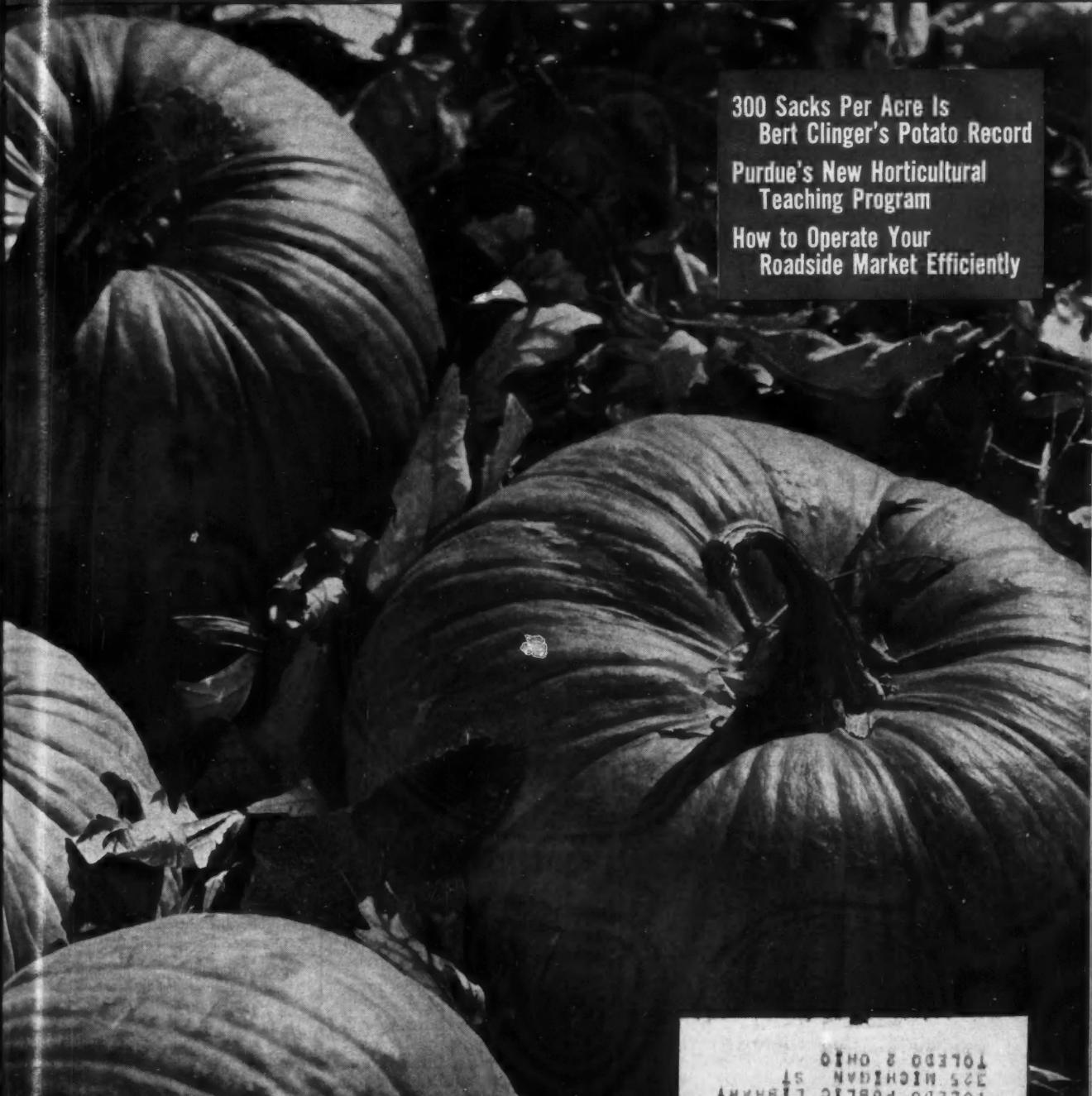


American Vegetable Grower

and MARKET GROWERS JOURNAL

OCTOBER • 1959

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Bert Clinger's Potato Record
Purdue's New Horticultural
Teaching Program
How to Operate Your
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Here's the kind of weed control you're looking for!
Vegadex® can give you weed-free fields like this, save hand labor, too.



MONSANTO'S "RED" EMM shows how one spraying of Vegadex cleaned weeds out of this spinach field without hand-weeding.

This new chemical weeder for vegetables works for you in a new way. You spray it on your soil once, at planting time. Vegadex kills annual grasses (even tough weeds like purslane and henbit) before they sprout—but vegetables come up unharmed. Growers all over the country report saving \$20 to \$100 an acre on weeding costs. Read what these growers say:

"Vegadex sprayed on our lettuce not only saved weeding costs, but reduced our fertilizer and water costs. Vegadex cut down disease and insect damage, too."

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Vegadex controls . . . purslane, careless weed, henbit (blueweed), pigweed, crab grass, barnyard grass (water grass), bull grass (goose grass), chickweed, foxtails, annual bluegrass.

Vegadex is safe for . . . collards, mustard greens, turnip greens, broccoli, cabbage, snap beans, soybeans, celery, sweet corn, kale, spinach, hanover salad, Brussels sprouts, lima beans, lettuce, garden beets, cauliflower, and field corn.

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St. Louis 66, Missouri

Please send me more information on Vegadex.

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Fertilizing
Dear Editor:
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Tulsa—Oregon
Waco—Sunland
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Shelton—Axtom-C

FLORIDA

Fort Pierce—W. F

Davison Chemical

OCTOBER, 19

LETTERS TO THE EDITOR

Fertilizing Vegetables

Dear Editor:

You have greatly improved what was formerly a market grower's journal.

However, in your April issue, the article, *Where You Place Fertilizer Will Govern Crop Size and Quality*, does not apply to vegetables. Vegetables are usually grown with ample plant food. In many cases where soil testing is not used, more plant food is applied than what is needed for some vegetable crops.

The application of farm practice to vegetables should be quite different from that used for applying plant food to field crops. The latter are usually grown with a minimum of plant food instead of the optimum. For that reason placement is necessary; likewise side-dressing.

Seabrook, N.J.

Frank App

Frank App is technical adviser of Seabrook Farms of New Jersey, and widely known for his work in improving vegetable production practices. He has found that broadcasting and plowing under the major part of the yearly fertilizer application is the most efficient method, measured by crop yields, convenience, and kind and amount of equipment and management. As a result of

Dr. App's findings at Seabrook, ordinarily no fertilizer is placed in the row at time of planting. He is not convinced it is necessary to side-dress long season row crops, such as corn, if they are properly fertilized before they are planted.

For some vegetables, such as spinach and broccoli, he doesn't think it advisable to apply all the required nitrogen before seeding because of toxicity.

Dr. App's point is well taken, but we are sure that the information on placement is of vital interest to many of our readers who have found that fertilizing at seeding time fits best into their type of farming operation. Meanwhile, we hope to persuade Dr. App to write more fully about his views for a coming issue of AMERICAN VEGETABLE GROWER.

Seeds Wanted

Dear Editor:

In furthering interest in the outside world in long-sick patients, I plan to use gardening as a major rehabilitative method. I'm in charge of a 700-patient psychopharmacological research unit.

It has been amazing and gratifying how small personal gifts of seeds and starting media have stimulated the patients' accessibility. They have access to window-box type growing areas at present, but there is more space available.

Washington, D.C. R. H. Ridenour, M.D. St. Elizabeth Hospital

We're sure that gifts of any extra seed you have will be much appreciated by Dr. Ridenour.—Ed.



MONSANTO'S "RED" EMM SAYS:

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Promotion Campaign

Dear Editor:

I note with interest references in recent issues of AMERICAN VEGETABLE GROWER to vegetable organizations which have instituted advertising and promotion campaigns.

Plans are being formulated by this federation, representing all vegetable growers in this country, for advertising and promotion campaigns, the first in the history of the industry in New Zealand.

I would greatly appreciate receiving the postal addresses of the presidents of some of these organizations in the hope that they will supply their New Zealand counterpart with details of their sales promotion campaigns.

Wellington, N.Z. D. W. Goble
N. Z. Vegetable & Produce Growers Federation

Chains Story Praised

Dear Editor:

Congratulations for your most enlightening article in the August issue under the heading, "We Put Some Questions to the Chains," by John Carew.

Will you please let us know if we can carry this article in an issue of Mushroom News with the proper credit line?

Kennett Square, Pa. Walter L. Gmuer
American Mushroom Institute

We are delighted to give Reader Gmuer permission to reprint the article.—Ed.



Look for this sign . . . it's your assurance of Monsanto Quality

control crop

& grove diseases

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TRIANGLE BRAND

COPPER SULFATE

**promotes healthy fruit
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The natural and economical way to promote fruit and vegetable profits is to give your crops the protection and nourishment of copper sulfate.

More than 70 years of dependable performance by Triangle Brand Copper Sulfate have eliminated the disease risks you take with fruit and vegetable profits. In spray and dust form, it controls the diseases which attack the foliage and fruit of citrus and nut trees, as well as blight and diseases in vegetable crops (leaf spot, anthracnose, etc.). It acts naturally to replace the copper in the soil.

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Send for your free booklet, you'll find it rewarding.



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American Vegetable Grower



Reg. U.S. Pat. Off.
Commercial Vegetable Grower
Market Growers Journal

VOL. 7 No. 10

OCTOBER, 1959

Cover photo by Bob Taylor. With Halloween just around the corner, we take the liberty of changing the poet's verse to:

*How imposing it would be
If pumpkins glowed upon a tree!*

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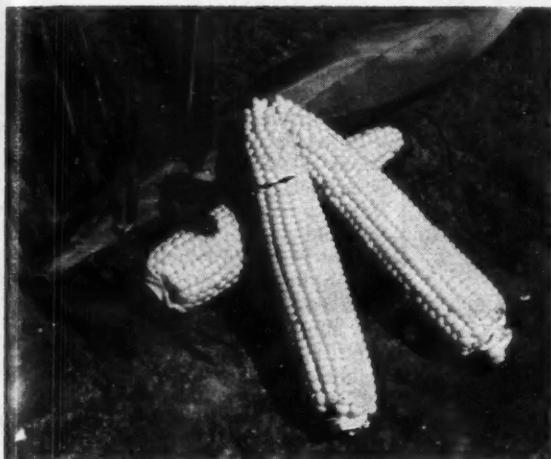
JOSE

OCTOBER,

HARRIS SEEDS

JUST WHAT BUYERS ARE LOOKING FOR

Here's a pair of new Harris hybrids that will really make your customers sit up and take notice. Growers who tried them last season have given us enthusiastic reports of their heavy yields and tremendous sales appeal. For modern markets that demand small, tight kernels and attractive appearance, Harris' Surecrop and Gold Cup are made to order.



Harris' SURECROP

Harris' SURECROP A Superior Market Type

Surecrop produces amazing yields of a type in great demand for market and shipping. Maturing in midseason, it yields quantities of fine ears, $7\frac{1}{4}$ - $8\frac{1}{2}$ inches long with 14-16 rows of narrow, glossy kernels. The tip fill is excellent, and the tapered husks are smooth and dark green with long tip cover and good flag leaves. The large plants are erect and vigorous with numerous tall tillers. We urge you to try Harris' Surecrop wherever Golden Security is grown.



Harris' GOLD CUP

Harris' GOLD CUP

Approved by Markets Across the Country

This new main-cropper gets highest praise from growers in many sections for its *very heavy yields, small-grained, attractive ears and upright plants with few suckers*. Ears are $7\frac{1}{2}$ -8 inches long, well filled with 14-16 rows of deep, narrow kernels of superior quality. Ready in about 80 days. Whether you sell on the market or at a roadside stand, Harris' Gold Cup will please your customers.

FOR GREENHOUSE TOMATO GROWERS

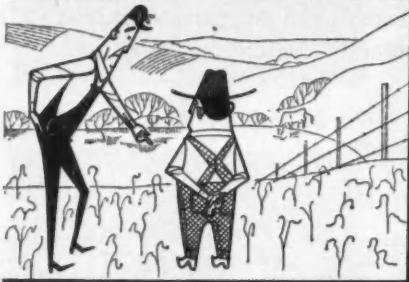
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For complete details on these and many more of Harris' top-rated market varieties, write for your FREE copy of our 1960 Market Growers' and Florists' Catalog, ready about December 1. In the meantime, we will be glad to quote on your requirements.

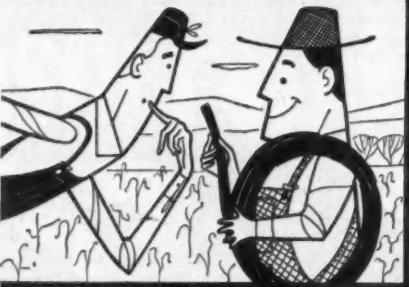
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*Skinny Frank Smith was the
county's worst grouch
Seemed headed straight for an
analyst's couch.
He had a big problem that really
was bad;
"My crops just won't grow, that's
what's making me mad!"*



*"It's water they're needing,"
said Weber his friend.
"I know that!" cried Smith,
his nerves straight on end,
"But what can I do when my
pond's down the hill,
And my crops way up here
looking droopy and ill."*



*"If that's your big problem,"
said Weber, a-grin
"This answer will sure make you
happy agin:
Get USS National Polyethylene
Pipe
To bring up your water and keep
your crops ripe."*



*A snap to install; it's so easy to do,
Why it goes anywhere that you
might want it to.
So now Frank Smith is no
longer a grouch,
He's calm and contented—
as his smile will vouch!*

Remember, USS National Polyethylene Pipe unrolls like a hose, resists acids, alkalies and rot, performs efficiently in a temperature range of -90°F. to +120°F., and won't crack or break in sub-zero weather.

National Polyethylene Pipe comes in lengths up to 400 feet, in diameters from $\frac{1}{2}$ " to 6". And, it's made of 100% virgin polyethylene plastic to which 3% carbon black filler has been added to prevent deterioration from ultraviolet rays. Insert fittings in nylon and styrene copolymers (NSF) are now available from National Tube. For complete information, write to National Tube Division, United States Steel, 525 William Penn Place, Pittsburgh 30, Pa., or see your nearest National Polyethylene Pipe Distributor.

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This seal of the National Sanitation Foundation means Tested...Approved...Sanitary!



USS National
Polyethylene Pipe



National attention was focused on the melon industry recently when a choice seedless watermelon was presented to Secretary of Agriculture Benson (left) by Judi Alexander, Washington, Ind., queen of the Indiana Watermelon Festival, and R. M. Frederick, executive secretary of VGAA.

VGAA'S 51st

THE 51st annual convention of Vegetable Growers Association of America will be held December 7-10 at the Dennis and Shelburne hotels in Atlantic City, N. J. R. M. Frederick, executive secretary of VGAA, reports the convention will be held in conjunction with New Jersey State Horticultural Society.

Highlighting the convention will be a series of informative speeches on subjects as varied as tomato breeding and sonic booms.

The program committee, headed by Brad Johnson of Rutgers' department of horticulture and VGAA's Mrs. Mary F. Hayes as administrative secretary, is rounding up an excellent roster of speakers.

Some of the men slated to appear are Dr. Victor R. Boswell, USDA; J. Harter, King Farms, Pennsylvania, and George Wedgworth of Florida Fruit and Vegetable Association. New Jersey's Governor Meyner will welcome the convention.

In addition to these informative speakers many social hours are being planned, starting with a Coffee Room on Sunday, December 6. Special programs will be held for the ladies.

Ample time will be provided to visit exhibits. Among the manufacturers and seed houses planning exhibits are John Bean, S. L. Allen, Jersey Package, Troyer Manufacturing, Lockwood Grader, Fruit and Produce Packing, Lord and Burnham, Asgrow, Joseph Harris, Union Bag, Geo. T. Ball, Ohio Boxboard, Geigy Chemical, Allied Chemical, DAO Corp., Alliance Rubber, Burpee Seed, Oliver Corp., Lummus Supply, and Powell Manufacturing.

The complete program of the convention will appear in the November issue of AMERICAN VEGETABLE GROWER. And be sure to check the complete list of exhibitors and their representatives which will appear in the December issue.

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VGAA.

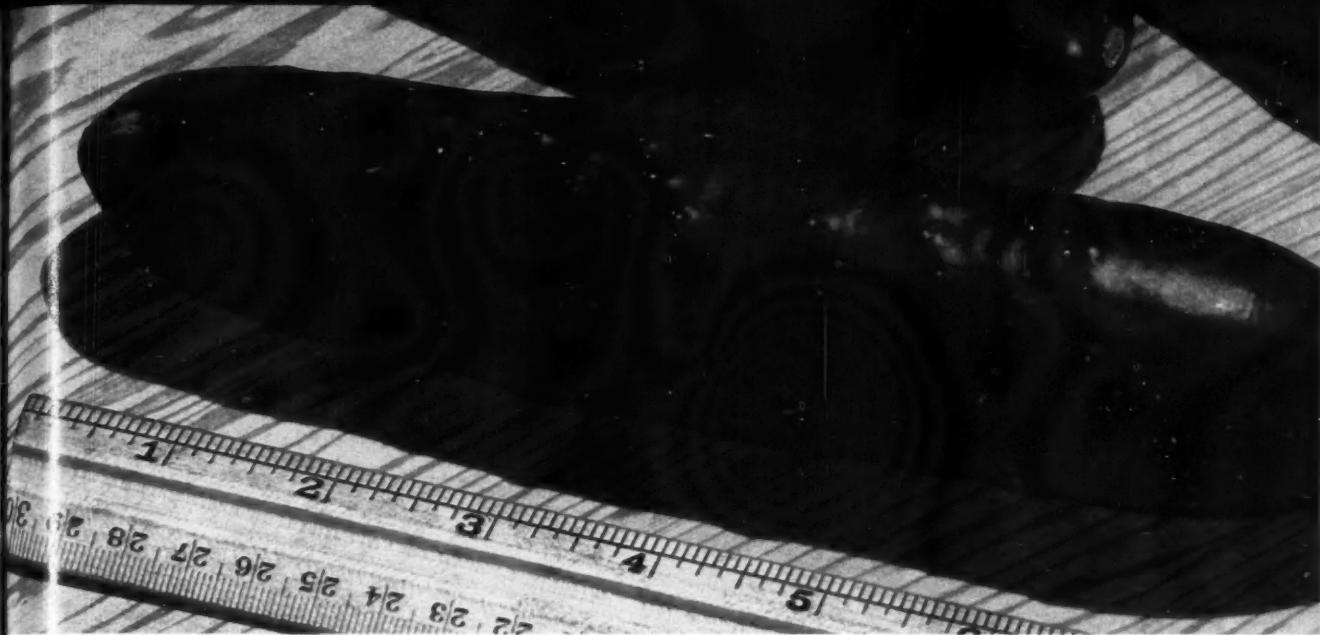
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**RESISTANT!
P-51 DMR CUCUMBER
IS OUTSTANDING SHIPPER**

This new Ferry-Morse development is ideal for shipping and has been tested with excellent results in Florida. Uniform, dark-green fruits average 8 inches long by 2½ inches in diameter. And P-51 DMR is Downy Mildew Resistant . . . yields are exceptionally heavy. Contact your Ferry-Morse representative today.



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PRODUCES DARKER GREEN,
MORE COMPACT HEADS**

Another Ferry-Morse introduction, Greenback is superior for market and shipping. Heads are uniformly round, darker green and more compact than standard varieties; average 7½" in diameter. Vigorous, short-stemmed plants are slow to produce seed stalks, grow well even in soil heavily infected with Yellows. Don't delay—fill your requirements now.





**SCIENTIFICALLY PACKED,
CONDITIONED SEED
FOR HIGHER YIELDS**

Another result of Ferry-Morse research! Most seed can be injured by excess heat and moisture. Ferry-Morse seeds are dried scientifically to just the right moisture content, then packed in air-tight cans or foil-wrapped packages. Seed stays fresh longer . . . sealed away from moisture, safer from rodents and vermin!

Tailor-made for you by **FERRY MORSE**

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**HOMESTEAD F-M 61 TOMATO
BEARS UP TO FOUR
QUALITY PICKINGS**

This special strain selected by Ferry-Morse breeders is more productive than regular Homestead. Compact, Fusarium Wilt resistant plants allow closer planting, produce heavy early fruit set, and, where adapted, continue to yield quality fruits through third and fourth pickings. Bright-red fruits are smooth, large and deep.



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OCTOBER, 19

American Vegetable Grower



Attractive home and neatly arranged buildings of the A. E. Clinger farmstead.

300 SACKS AN ACRE . . .

Bert Clinger of Bingham County, Idaho, produces 50 sacks of potatoes more per acre than the average for his county. Here's how he does it

By MILTON B. WESTON

Bingham County Extension Agent, Blackfoot, Idaho

FOR the past 25 years A. W. (Bert) Clinger, Bingham County, Idaho, has been growing Idaho Russets. This year he has better than 100 acres.

Clinger lives about 2 miles north of Shelley, the town that is advertised as "The Home of the Famous Idaho Russet". Shelley is the only town in the state that honors the Idaho Russet by setting aside one day each fall known as "Spud Day". Potatoes are entered in competition with potatoes from a radius of 150 miles. Baked spuds, with plenty of butter, are served free to everyone attending. Potato picking contests are held and the state champions of the men's and women's divisions are named at this celebration.

Clinger has been interested in potatoes all his life. He was graduated from University of Idaho in agriculture and taught school for 21

years, during which time he raised a few potatoes on the side. Finally he quit teaching to give full time to farming.

Clinger is producing 280 to 300 sacks of potatoes per acre, which is 50 sacks above the county average. When Clinger is asked how he gets his high yields, he replies: "Very simple. Anybody can grow them by paying attention to sound farming and conservation practices."

He is using a six-year rotation program pin-pointed toward potato production. Three years of alfalfa grass hay are followed by two years of potatoes and one year of grain, which is used as a nurse crop for a new stand of hay. All of the hay, about 300 to 400 tons per year, is used to feed cattle on his place. The straw is used for bedding. The hay is eventually returned to the land as manure to maintain soil fertility.

On the third year of hay, the third crop is plowed down, which helps build up the humus in the soil. In

addition, 500 pounds of 16-20-0 fertilizer are applied to the potato ground, plus 15 tons of barnyard manure. Phosphate at the rate of 300 pounds per acre is applied to the hay crop the first year.

Clinger maintains fertility by keeping in the soil the raw materials needed for large potato crops. "Just like a bank," he comments. "The plants can't get it out if it isn't there.

"Keep the soil loose and give the plants air," he emphasizes, "because you need a friable soil to grow quality potatoes. Never get on the land when it is too wet. You just compact the soil when you do."

Clinger cultivates to control weeds, make deep furrows, and cover the potatoes. He cultivated three times last year and doesn't think more than four times is necessary.

Irrigation is important in raising the Russet Burbank. The first irrigation determines to a large extent the quality of the crop. Clinger advises not to delay the first irrigation too long. The initial application should be made 30 to 40 days after planting, depending on the moisture in the soil.

Clinger has found that potatoes cannot be irrigated by the calendar. "We dig down into the ground where the potatoes are growing, get a handful of soil, ball it up, and toss it about a foot into the air two or three times," he explains. "If the ball crumbles, we know it is time to irrigate. If it does not, we know it

(Continued on page 19)



Bulk harvesting for which Clinger uses a two-row Forbes potato combine.



County Agent E. E. Randle, left, and Irwin Rutledge look over promising field of pole snap beans on Rutledge farm.

The RUTLEDGES *Grow* 20 CROPS A YEAR

Mississippi's vegetable growing family harvests from April to October, sets the pace for quality products in their area

By CHESLEY HINES

Mississippi State University

A DIVERSIFIED and efficient vegetable production and marketing program has gained Carlton Rutledge recognition as the outstanding market grower in Mississippi. The Rutledge farm, which is strictly family-operated, is located in the long-famous Crystal Springs-Hazlehurst commercial vegetable area. In recent years he has expanded and changed his vegetable program from that of growing only the four principal commercial crops of that area to growing over twenty different crops which are marketed from April through October.

Soon after the state-owned Farmers' Central Market was opened in 1950 at Jackson, which is some 30 miles from his farm, Rutledge began selling part of his vegetables there instead of depending altogether on the local shipping sheds. Within the last few years, he has marketed a large percentage of his wide variety of products on two rented retail stalls at this market.

He and his fine family of four boys and four girls, aged 13 to 24, have established an enviable reputation on the market for producing, preparing, and handling the highest quality products throughout the season. The manager of the market, S. W. Box, is

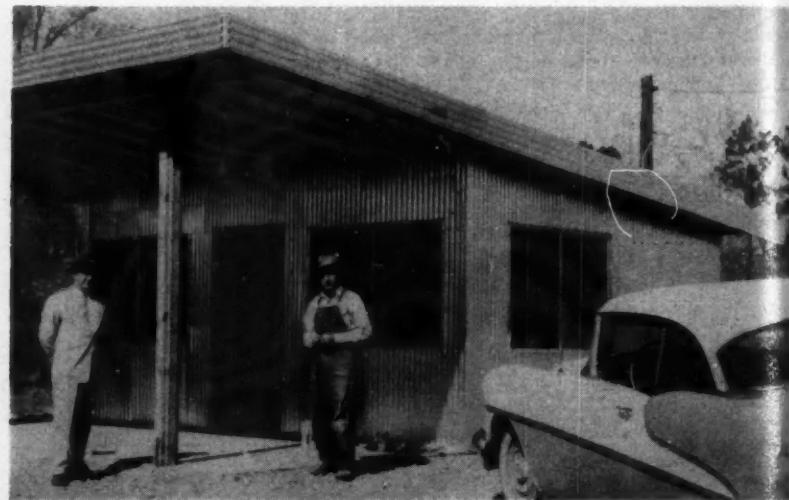
high in his praise of the Rutledge family. Box says that the Rutledges' outstanding efficiency and insistence on quality have greatly influenced the 30 other growers operating stalls on the retail sheds. He also gives the Rutledges much of the credit for increasing the demand for produce sold there.

Rutledge and his oldest son, Irwin, operate in partnership a total of 229 acres with approximately 75 acres under cultivation, much of which pro-

duces two crops each year. Since they follow the annual method of growing strawberries, this land is used for peas or other vegetables after the strawberry season is over in late May. Other early vegetable crops such as cabbage, turnips, onions, and lettuce are followed by corn or fall tomatoes, beans, etc.

The Rutledges grow the recommended vegetable varieties and follow the best production practices in cultivation, fertilization, and control of insects and diseases. They make succession or staggered plantings of such crops as sweet corn, tomatoes, southern peas, lima beans and snap beans which have a long-season demand.

In order to produce profitable yields of high quality vegetables throughout



New roadside market complete with walk-in cooler and display racks recently opened by Carlton Rutledge, right. Left is J. A. Campbell, superintendent, Truck Crops Branch Experiment Station.

AMERICAN VEGETABLE GROWER



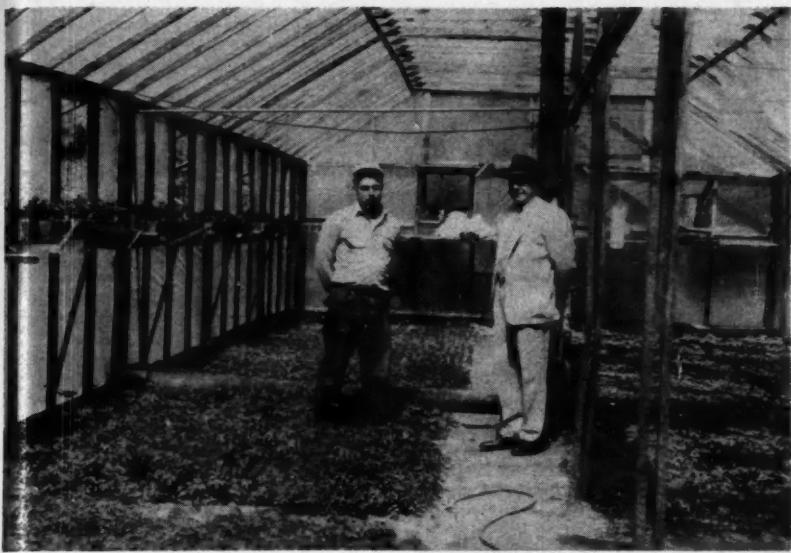
Irwin Rutledge's vegetable garden.

WHAT	CROP
Turnips and mustard greens	Lettuce (heads)
English peas	Onions—green and matured
Cabbage	Strawberries
Bush snap beans	Pole snap beans
Squash	Cucumbers
Irish potatoes	Tomatoes
Green peppers	Okra
Eggplant	Sweet corn
Sweet potato	Southern peas
Lima beans	Cantaloupes



The Rutledge's seven acre garden.

the summer important flood irrigation ridge farm located in the water equipment minimum pressure sprinklers.



Irwin Rutledge, left, and J. A. Campbell inspect tomato plants in plastic greenhouse.

WHAT THE RUTLEDGES GROW		
Crop	Acreage	Market Season
Turnips and mustard greens	5	October-May
Lettuce (head)	1/2	April-May
English peas	1/2	April-May
Onions—green and mature	4	April-October
Cabbage	2	April-May
Strawberries	5	April-May
Bush snap beans	10	May-July, October
Pole snap beans	1	May 15-October 15
Squash	1/2	May-October
Cucumbers	1/2	June-July
Irish potatoes	1	June-August
Tomatoes	6	June-October
Green pepper	1/2	June-August
Okra	3	June-October
Eggplant	1/2	July-October
Sweet corn	15	June-October
Sweetpotatoes	2	July-October
Southern peas	15	June-October
Lima beans	5	June-October
Cantaloupes	2	July-August



Field of Kokomo tomatoes is checked by Irwin Rutledge, left, and County Agent E. E. Randle.



The Rutledges never need to fear inadequate supply of water for irrigation. This is one of seven ponds on the farm. Fields below the dam are planted in cabbage and strawberries.

the summer and fall, irrigation is an important aid. Both sprinkler and flood irrigation are used on the Rutledge farm with seven small ponds located in convenient areas providing the water supply. Their irrigation equipment includes Champion aluminum pipe equipped with Skinner sprinklers. Their Gorman-Rupp pump

is powered by a Briggs & Stratton motor.

Rutledge and his family look to the county extension agents and the staff at the Truck Crops Branch Experiment Station for the latest information on production problems. Rutledge is research-minded and is most co-operative in conducting demonstra-

tions on recommended practices and trial plantings of new varieties.

On frequent visits to the experiment station, the Rutledges observed and became interested in growing winter tomatoes in a plastic greenhouse which was under test there. As a result they constructed a 60 x 20-foot plastic house in the fall of 1958 and produced an excellent crop of tomatoes which were marketed at fancy prices in December and early January. Even before the tomatoes completely stopped producing, they removed the vines in order to start tomato plants for the spring crop. The first crop of plants was transplanted to cold frames in February and a sec-

ond crop of plants grown in the greenhouse. Returns from the first winter crop of tomatoes in this small greenhouse venture paid all construction costs. The Rutledges are planning to build at least one more plastic greenhouse, 100 x 20 feet, for tomato production in 1959-60.

Last May an attractive new roadside market, built and owned by the Rutledges, was opened on U. S. Highway 51 between Hazelhurst and Crystal Springs as an additional outlet for their produce. The operation of this stand as well as the stalls at Farmers' Central Market is a family affair. All eight of the children assist with production, harvesting, preparation, and transportation of the produce to these two outlets and then help with the selling.

Extra help is employed during peak harvest seasons, but a large part of the work required to make this diverse growing enterprise successful is done by this energetic family. **THE END.**

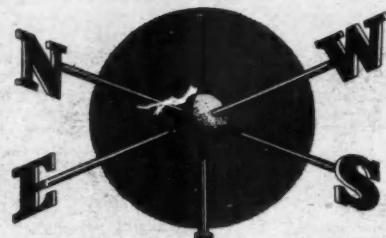
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NEWS

- Florida Tomato Regulations Dropped
- Wisconsin Co-op Boasts of Family Representation

Tomato Committee Disbands

FLORIDA—Failure to reach agreement on regulation of the tomato industry has forced disbandment of the Florida Tomato Committee, formed in 1956. As a result, Florida tomatoes will move to market in the 1959-60 season without regulations.

Representatives of the Dade County, Indian River, and Ocala regions had opposed the group on grounds its regulations were by recommendation of competitive growers on the committee and were discriminatory.

Florida's tomato industry has an annual income of about \$50 million. The state has no minimum trading standards for tomatoes.

F. (Bing) Miller, USDA field representative in Lakeland, Fla., was appointed trustee and custodian of funds, records, and property.

Co-op Profits

WISCONSIN—Antigo Potato Growers, Inc., a modified co-operative formed by 30 Langlade County growers, will market this year's crop under the name of "Antigo Royals." All potatoes will be federal-state inspected, with No. 1 washed potatoes labeled "Antigo Royal Aces" and No. 1 unwashed, "Antigo Royal Kings." Commercial grades will be dubbed "Queens."

The 30 growers planting 2800 acres of potatoes have signed with the co-op for a three-year period after which they may resign at will. About 75% of the farms represented are owned and operated by family combinations, such as father-son or brothers.

In operation since last January, the organization marketed 450 carloads of potatoes with \$226,000 volume of business in a four-month period. It showed a profit in what growers call "half a market."

Officers of the co-op are Lyman Diercks, Bryant, president; A. E. Hoeft, Deerbrook, vice-president; Patrick Diercks, Antigo, secretary-treasurer; and Joe Boe, Antigo, manager. Gerald Schmiege, Wayne Brittenham and Vern Rine, all of Bryant, and John Morrissey, Antigo, are directors.

Tomato Order Hearings

CALIFORNIA—A production control marketing order has been proposed by California Tomato Grower Association, Inc., Stockton, and Statewide Canning Tomato Grower Committee.

The proposal was introduced at a meeting attended by more than 250 tomato growers and representatives of the tomato canning industry. W. R. "Bill" Lider, Winters, chairman of the statewide grower committee, who introduced the proposal, pointed to the violent instability in the marketing of processing tomatoes and

POTATO GROUP ELECTS EASTMAN

The Potato Association of America at its 43rd annual convention held at Fredericton, New Brunswick, Canada, elected Paul J. Eastman, of Augusta, Maine, president. Eastman is chief, Division of Plant Industry, Maine State Department of Agriculture. He has been active in Maine certified seed potato program.



Eastman

to the marked variation in planted acreage in recent years as indications of its need.

The proposal brought out heavy opposition from canners. The hearing was postponed for a month so that the statewide committee could study an oral amendment offered by Fred Heringer, Oroville, who was testifying as a proponent of the order.

Fertilizer Effect on Melons

ARKANSAS—Tests at Arkansas Experiment Station indicate that fertilization has a major effect on the number of marketable melons produced and a minor effect upon melon size.

Researchers found that a shortage of any of the major fertilizer elements tended to reduce sugar content of melons. When yields were not affected by fertilizer differences, sugar content was not affected. Thus, providing adequate fertilizer for good yields assures good quality.

Sixty pounds of nitrogen an acre as 30 pounds under the row and 30 pounds side-dressed resulted in good yields. For highest yields researchers found it necessary to apply 60 pounds of phosphorus and 30 to 60 pounds of potassium an acre in addition to the nitrogen.

Hort Field Day

MICHIGAN—Hybrid plants were the theme at the annual horticulture field day on Michigan State University experimental farm, East Lansing, in August.

Horticulturist Clinton E. Peterson reported that experimental hybrid plants have outyielded open-pollinated varieties by 15% in MSU tests.

Peterson and plant pathologist Donald J. deZeeuw reported they have developed about a dozen mosaic-resistant cucumber lines and they hope at least one may be ready for limited use next year. In experimenting with gynoecious or all-female cucumbers, Peterson says such plants may speed up breeding for hybrid lines.

Agricultural engineers Bill A. Stout and George Bingley explained their new mechanical pickle harvester. Stout stated the harvester does injure cucumber plants slightly, but the labor saved should make up for this. Stout has also developed a tomato harvester that injures almost no ripe tomatoes but that may injure varieties that crack around the top.

MSU researcher John Carew showed visitors a water soluble plastic tape for



SOUTH TEXAS PUTS ON COLORFUL VEGETABLE SHOW

The annual South Texas Vegetable Day Exposition is one of the most colorful of its type in the country. The 1958 show was held in the modern Terminal Produce Market in San Antonio and attracted 243 entries from all parts of Texas. It is expected that this year's show on November 14 will be bigger and better. Details may be obtained by writing South Texas Vegetable Exposition, Produce Terminal Market, 1500 S. Zarzamora St., San Antonio.

Photo was taken during South Texas Vegetable Day Exposition in 1958. From left: Henry Van De Wall, president, South Texas Vegetable Day Exposition; Aubrey H. Kline, Pearl Brewery Co., San Antonio, who purchased the Grand Champion bushel of crookneck squash for the record price of \$1500; Frances Willard, Vegetable Day Queen; grower Kenneth Hoffman, Poteet, who exhibited the prize-winning squash; and Pat O'Brien, Pearl Brewery Co.—H. C. Mohr.

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planting lettuce seed. He is trying to find out if the precision-planting tape affects plant growth, disease resistance, and other factors.

Researcher Robert Carolus is seeking causes of internal browning of tomatoes. He thinks maybe plant temperature, a virus, natural water loss through leaves, climate, or poor root systems may be involved.

Not Enough

ALASKA—Overall vegetable production in Alaska in 1958, according to a summary report issued by Alaska Department of Agriculture, Alaska Experiment Station, and USDA, was down 11% while total value increased 9% over 1957.

Cabbage, totaling 225 tons, was down 37% while carrots at 311 tons increased 23%. U.S. No. 1 potatoes totaled 6950 tons; celery, 52 tons; and radishes, 31 tons.

No vegetable crop was large enough to fill local demands except lettuce which amounted to 247 tons. Vegetables represented 8% of the total farm sales.

Manatska Valley was the principal vegetable producing area in 1958.

New Potato Variety

COLORADO—Blanca, a new potato variety that cooks and bakes well and can be boiled without sloughing, has been developed by Colorado State University.

Blanca is a smooth white skinned type, oval to round and slightly flattened. It is highly resistant to scab. Plants are medium maturing and of medium height and produce potatoes with high dry matter content under Colorado conditions.

Yields run around 250 sacks per acre and the new variety produces a high percentage of U.S. No. 1 potatoes with practically no growth cracks, hollow hearts, or knobs.

Sources of seed are available from Dr. C. W. Frutchey, Potato Certification Service, Colorado State University, Fort Collins.

Increased Cabbage Yields

NEW YORK—The average yields of marketable cabbage grown for processing were increased better than 4 tons to the acre by well-timed irrigation in tests covering four growing seasons at Cornell's experiment station at Geneva.

The cabbage experiment is part of a large-scale investigation on the use of irrigation in the growing of vegetable processing crops. During the four years the cabbage received on the average 4.3 inches of irrigation water per acre each year.

The largest yield of marketable heads average 33 tons to the acre for the four-year period, according to the station workers. This yield was obtained from irrigated plants spaced 12 inches apart in the row and given twice the normal amount of fertilizer.

Wunsch Retires

NEW MEXICO—William A. Wunsch, affectionately called the "father of New Mexico's fruit and vegetable industry," retired recently after 31 years with New Mexico State University and 18 years as supervisor of the State Department of Agriculture's Fruit and Vegetable Standardization Service.

Prior to 1941, there were no certified standards for products shipped out of state.



Wunsch

Under Wunsch's leadership, the fruit and vegetable standardization service started grading and inspection, according to U.S. grades and standards, all produce shipped from the state.

Wunsch is president and past vice-president of National Association of Marketing Officials and is a member of the New Mexico Fruit and Vegetable Growers Association.

Fewer Tomatoes

NEW JERSEY—Production of tomatoes in New Jersey will fall short of the average annual crop despite record-breaking yields. A 30% reduction in acreage from 1958 is responsible. Total production is forecast at 182,000 tons as compared with 250,700 tons in 1958. Yield per acre is placed at 13 tons, a record for New Jersey. Quality is above average.

Rutgers Popularity Waning

PENNSYLVANIA—Two relatively new varieties of tomatoes, KC 135 and 146, appear to be displacing the long-time king of the canning crop, Rutgers, according to W. L. Yount, state department of agriculture plant pathologist.

The varieties were developed and introduced by the Campbell Soup Company, Camden N. J., in 1957. Prior to that time, the Campbell Company had been using a Rutgers strain.

Up until 1956 the Rutgers variety made up nearly 90% of the plants shipped into Pennsylvania. Since that time the popularity of Rutgers has declined until in 1959 it made up only 35% of the total number of plants shipped in.

At first, the new varieties were used only by the Campbell company, but this year all of the leading companies and plant brokers distributed them.

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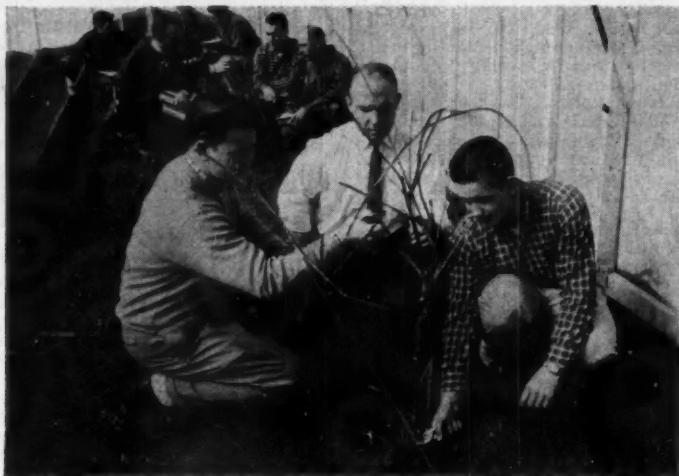
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Laboratory training at Purdue in winter is conducted in plastic greenhouses.

TRAINING FUTURE LEADERS

By Department of Horticulture Staff

Purdue University,
 Lafayette, Ind.

Training graduates in vegetable crops is important for the future of the vegetable industry. Here is how one famous agricultural college has revised its course of instruction to better meet the needs of its students and the commercial vegetable industry.—Ed.

cific problems encountered after graduation.

The laboratory facilities have been increased with the addition of property for experimental growing and plastic greenhouses for winter use.

Each student either selects or is assigned to a staff counselor who helps him in the scheduling of courses, advises him on problems, and motivates him to excel in his studies. Counseling is an important and essential part of the undergraduate program.

Staff members who previously devoted all of their time to research have been recruited to help teach the undergraduate courses. This permits former full-time instructors to spend time in research, thus equipping them to do a better teaching job, and the student benefits from his association with a greater number of instructors.

The staff members positively support the Student Horticultural Club and encourage student participation in this and other horticultural extracurricular activities.

Research work has been greatly expanded. It is the policy of the department to give horticultural science majors the first opportunity for employment on the research projects so they gain experience as well as a monetary return.

In this era of fitting the educational program to the needs of the times, Purdue's revised program should become increasingly attractive to intelligent young men and women who have a desire to render productive service in the horticultural industry.

THE END.

TWO similar market same day. Several hours fresh apples the other have dried, dull kernels.

The market is Monday. melons, generally, have loss in the others over 100 look as good. Snap beans lot is plump, vested the "snap."

This is a vegetable balance. The drying, and during harvest.

This is aistic of freedom looked whirly, disease appearance.

Durable use buyer production counts for tudes in the Durability among acquired.

Sweet corn an instance day this several different maturity. exposed to one variety dented due attractive. appearance it was first sold readily.

The diff tougher product content of fortunately was the poor eating quality often in com-

Durability influenced maturity at harvest and control, and such as fiber of growth.

As It Looks to Me

By JOHN CAREW

Michigan State University

TWO sweet corn varieties of similar maturity are harvested the same day. Both are left in the sun for several hours. One retains a bright fresh appearance; the other has shriveled, dull-looking kernels.

The muskmelon shelf in a supermarket is filled on Monday. Half the melons, grown locally, have a 30% loss in three days. The others, shipped over 1000 miles, look as good as the day they arrived.

Snap beans arrive on market. One lot is plump and crisp, the other, harvested the same day, has lost its "snap."

This is durability—the ability of a vegetable to maintain a fresh appearance. The ability to endure bruising, drying, and temperature fluctuations during harvest, packaging, shipment, storage, and store display.

This is durability—the characteristic of fresh vegetables so often overlooked when we talk of yield, maturity, disease resistance, taste, and appearance.

Durability is often behind a produce buyer's preference for certain production areas. It occasionally accounts for anti-"home-grown" attitudes in the chains.

Durability in vegetables, like honesty among men, may be inherited or acquired.

Sweet corn, for example, provides an instance of genetic durability. One day this summer we harvested several different varieties with similar maturity. The ears were husked and exposed to the sun. After six hours, one variety had shriveled badly with dented dull kernels. It was most unattractive. The other retained an appearance strikingly similar to when it was first husked. It would have sold readily.

The difference probably was in the tougher pericarp and lower sugar content of the durable variety. Unfortunately the better looking variety was the poorer tasting. Durability and eating quality (taste and texture) are often in conflict.

Durability of vegetables may be influenced by genetic background, maturity at harvest, cooling between harvest and store display, disease control, and possibly many other factors such as fertilizer, irrigation, and speed of growth.

Muskmelons harvested at quarter-slip or no-slip will be more durable but less tasteful than those allowed to ripen on the vine. How shipping areas decide this compromise influences their reception on the market. Many consumers would say the forces of durability are winning over the proponents of taste.

Locally grown carrots often seem less sweet and less crisp than those shipped from long distances. Some growers attribute this, not to a difference in inherent quality or production environment, but to the fact that carrots shipped long distances have been exposed to high humidity and low temperature for two to four days.

The perishable nature of fresh fruits and vegetables largely accounts for the enormous handling and distribution charges and the unusually high retail markup.

Efforts to make these items more like the hardware commodities of soap, canned goods, etc., are constantly underway. Prepackaging, vacuum cooling, hydrocooling have made their contribution.

But an unexplored area of research still exists in studying the on-the-farm factors influencing the durability of vegetables. THE END.



ONION FORECAST

THE National Onion Association predicts the 1959-60 onion crop will top 30 million bushels.

Jack Rose, executive secretary, East Lansing, Mich., highlighted association plans for additional onion acreage next year. With population increases, the United States is capable of consuming 5 million bushels more per year than 20 years ago, he explained.

About 5000 acres of onions will be used by dehydrators. One bag out of every nine will be processed.

RESEARCH REPORT

THE 9th Annual Report of the British Society for the Promotion of Vegetable Research is now available in limited quantities.

This report contains the latest scientific findings of the society's research station. Research reports on plant breeding, pest and weed control, and cultural methods and irrigation charts are included.

The booklet may be obtained from G. Lesson, Secretary, National Vegetable Research Station, Wellesbourne, Warwick, England, at a cost of \$1.20 per copy.



Our specialization gives you 60 top watermelons!



"And by 'top' watermelons, we mean varieties like the Robinson strain of Charleston Grey shown here," says

Lawrence Robinson, Jr., whose family has concentrated on watermelon and other vines seeds thru three generations. "This Charleston Grey is resistant to both Anthracnose and Fusarium Wilt, and is outstanding for its vigor, uniformity and yield! All sixty Robinson strains are grown in California's mountain valleys where seed-borne diseases don't exist, and citron, often a menace to quality, is at a minimum. Ask your supplier for Robinson choice watermelon seed, with the bright blue SRS label!"

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TOMATOES

Three Times Faster!



J. M. McGinnis, above, grows 8000 tomato plants per acre on his 120 acres at Hi-Ripe Farms, Delray Beach, Fla. Vine-ripened and picked when breaking color. Hi-Ripe tomatoes are distributed throughout the U.S. and Canada.



Field workers place stakes for wiring crew among rows of baby tomato plants. A 7-foot post, which is 7 x 6 inches, is sunk every 400 feet and a $\frac{3}{4}$ x 1-inch post every 30 inches. Wires strung along line of posts are stapled with Bostitch tacker. String is woven in to support plants, three rows of string with one row of wire.



Close-up of Bostitch model T5-B stapling tacker. Bostitch tackers are three times faster than applying staples with hammers. Staplers are easier to use, stand up well under constant wear.

NEW SQUASH VARIETY

A NEWCOMER to the vegetable kingdom, "Red Skin" squash, was displayed at the State Fair in Syracuse, N.Y., in September by Cornell University's Experiment Station at Geneva. The new squash is primarily a processing variety.

Seed of the new variety will be available from seedsmen in 1960.

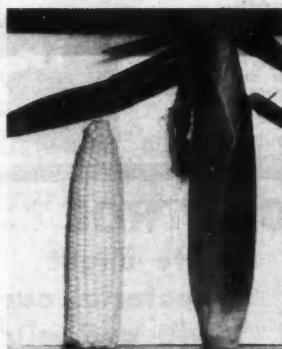
Holmes Hybrids for 1960

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Superior for earliness and uniformity, an F1 hybrid of the Golden Acre Type. Matures earlier with a beautiful round head of about 3 pounds. Very uniform with few outer leaves, plants compact and short stemmed.

Holmes Honey Gold

Outstanding in its class. A second early maturing in the Carmelcross season. Plant has good strong stalks, with very few suckers. Ears 7 to 8 inches long, 14 to 16 rows. Ears stand out so they can be easily snapped. Ear shape is good giving it nice eye appeal. Tip cover is good. Kernels are deep and has excellent color and flavor. We urge you to try some this year.



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ADIRONDACK GARDENS FOR SALE

One of the outstanding vegetable farms in the East is now for sale because of illness. Here is an opportunity that doesn't often happen. 500 acres of highly developed soil, located in the cool climate north of the Adirondacks. Boasting a spinach variety that demands high prices at all markets and is firm enough under August production to stand up under Cello packaging. Known as Langdon's Adirondack spinach, this strain has made the farm famous nationally. August spinach from Adirondack Gardens has for twenty years been quoted by itself on the New York market.

The farm also has reputation for the production of Pennlawn Fescue lawn grass seed. Thus, even the green manure crop which keeps the soil in best fertility is in itself a top market product.

This is a farm which you should see. Write, wire, phone or visit Adirondack Gardens, Malone, New York. Mr. Langdon will be glad to answer all your questions and show you around.

The telephone number is Malone 865



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The greenhouse that gives more light, finest ventilation. Precision pre-fabricated, easily erected, maintenance free. Straight or curved glass eaves. Priced right.

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- bacterial canker
- wilt and mildew

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cm-19*

Safe on foliage of potatoes and tomatoes when used as directed.

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Division **CHEMICAL**
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Your guide to air carrier spraying.

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DEPENDABLE, SAFE, LOW COST PLASTIC GREENHOUSE HEATERS



LP or Natural Gas



60,000 or 35,000 BTU input
Bugged construction (aluminized steel) (no rust)
1,000 ft. safety pilot-automatic
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Directional heat flow
Blower attachment available
for use with outstanding
results
Free greenhouse plans sent
on request

Blower Attachment

WRITE

BURLEY BURNER CO., Inc.
2417 Nicholasville Pike Lexington, Ky.

GREENHOUSE CROPS

Phosdrin Controls Old Enemies

INSECT problems continue to harass growers despite the many technological advances that have been made throughout the vegetable industry. To overcome this, insecticide manufacturers, through chemical research programs, are constantly developing new pesticides to meet insect threats. One of the newer developments for greenhouse insect problems is Phosdrin® insecticide. It is now being offered in an aerosol container by Virginia Smelting Company. Phosdrin insecticide aerosols should prove to be a boon to greenhouse operators plagued with aphids, greenhouse whitefly, cabbage loopers, and mites on tomatoes and cucumbers.

Phosdrin insecticide has been widely used in field operations, but has only recently been introduced to the greenhouse. It was developed primarily to fill the need for a short residual insecticide that could be used close to harvest without leaving a harmful residue on the crop. On tomatoes and cucumbers, it can be used up to one day before harvest.

As a 10% aerosol, Phosdrin insecticide is convenient to apply. The person making the application simply walks down the aisle pointing the nozzle of the aerosol unit upward and behind him so that the nozzle is 2 to 3 feet above the tops of the plants. He can gauge his walking speed to the calculated dosage and the time required to release the recommended volume of material. As a double check the cylinder can be weighed before and after application to make sure the proper dosage has been put out.

In most cases Phosdrin insecticide, when applied in this manner, will treat two benches at a time from each side of the aisle. The greenhouse should be tightly closed and ventilation should be shut off at least two hours following application. This obviously will restrict the use of the aerosol to such times as temperatures will permit the greenhouse to be tightly shut.

During warm periods the application may best be made in the early morning, late afternoon, or on cloudy days. If the application is made in the late afternoon, the house can be kept closed all night. The enclosed area should be thoroughly ventilated for at least one hour before regular work is resumed.

It is important that Phosdrin insecticide be applied properly. This material has been widely used by fruit and vegetable growers through-

out the country and it has been clearly shown that it can be used safely as long as the recommended application procedures are followed.

Like most organophosphorus insecticides Phosdrin is highly poisonous to animals including human beings and the specified safety measures are extremely important. The worker who makes the application should wear a



Operator applying Phosdrin looks like outer space man in protective clothing and gas mask.

full-face cannister gas mask that has been approved for Phosdrin applications. He should wear clean impervious protective clothing including cap, overalls, shoes, and rubber (or rubber-dipped) gloves.

The worker should remove his protective clothing immediately upon completing the "bombing" and the clothing should be washed and cleaned before re-use. Street clothing should not be worn under it. The gloves should be replaced frequently and contaminated gloves should be destroyed to prevent their being re-used.

After the application has been made, the worker should bathe or shower thoroughly and he should always wash his hands and face before eating or smoking. Complete information on the safe handling of Phosdrin insecticide can be obtained from Shell Chemical Corporation, 460 Park Ave., New York, N.Y., Bulletin SC:58-57 "Safe Application of Phosdrin Insecticide."

For control of aphids, greenhouse whitefly, mites, and cabbage loopers, the 10% aerosol is applied at the rate of 0.1 pound of actual material per 50,000 cubic feet. It is recommended that treatment be started as soon as insects appear and that applications be repeated as often as necessary to maintain control.

THE END.

AMERICAN VEGETABLE GROWER

CALENDAR MEETINGS

Oct. 4-7—
Officials annual
Atlanta, Ga.
Colleges, 1145 Peachtree

Oct. 21-23—
Association's
Shevaton Hotel,
Director, 1145 Peachtree

Oct. 27-29—
72nd annual
—S. John Homestead, Ill.

Oct. 27-29—
meeting, Am.
—Frank E.
Blvd., Los A.

Nov. 4-5—
County High
Simons, Exec.
Assn., Fidelis
Wis.

Nov. 12—V.
Co-operatives
Yakima, Wash.

Nov. 14-15—
Production
South Texas
Terminal Ma.
Antonio.

Nov. 19-20—
La Salle Hotel,
Executive Di.
ton, D.C.

Nov. 19-22—
Operation, Open
Station Direc.

Nov. 30—
Vegetable Assn.
Columbia, Wash.
State Farm

Nov. 30—
America, Can.
Sheraton
Arnold Mall
Co., P.O. Box

Dec. 3-4—
Short Course
Station, Waco.

Dec. 5-6—
meeting, Ho.
Sec'y, Box 7

Dec. 6-10—
Association's
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Dec. 7-10—
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Dec. 10-11—
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Hanford, Wash.
Box 421 Sta.

Jan. 13-16—
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Jan. 25-30—
Feb. 1-3—
Association's
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Columbus.

Feb. 3-5—
annual meet.
Ellenwood, S.

April 14-15—
Association's
Hilton Hotel,
ters, 777 14th

Oct. 10-11—
Harvest Phys.
City of Calif.
Univ. of Cal.

OCTOBER,

CALENDAR OF COMING MEETINGS AND EXHIBITS

Oct. 4-7—National Association of Marketing Officials annual convention, Asheville, N.C., and Atlanta, Ga.—Wm. A. Wunsch, Pres., State College, N.M.

Oct. 21-23—National Agricultural Chemicals Association 26th annual meeting, French Lick Sheraton Hotel, French Lick, Ind.—Denis Hayley, Director of Information, Associations Building, 1145 19th St., N.W., Washington 6, D.C.

Oct. 27-29—Florida State Horticultural Society 72nd annual meeting, Everglades Hotel, Miami—S. John Lynch, Pres., 29800 Newton Rd., Homestead, Fla.

Oct. 27-29—Western Growers Association meeting, Ambassador Hotel, Los Angeles, Calif.—Frank E. Castiglione, Sec'y, 3091 Wilshire Blvd., Los Angeles 5.

Nov. 4-9—Wisconsin Potato Show, Langlade County Highway Bldg., Antigo—Harold R. Simons, Exec. Sec'y, Wisconsin Potato Growers Assn., Fidelity Savings Bank Bldg., Antigo, Wis.

Nov. 12—Washington State Council of Farmer Co-operatives annual meeting, Hotel Chinook, Yakima, Wash.

Nov. 14—South Texas Vegetable Day Exposition, Produce Terminal Market, San Antonio—South Texas Vegetable Exposition, Produce Terminal Market, 1500 S. Zarzamora St., San Antonio.

Nov. 17-19—National Potato Council meeting, La Salle Hotel, Chicago, Ill.—A. E. Mercker, Executive Director, 542 Munsey Bldg., Washington, D.C.

Nov. 19—New Jersey Marketing Institute annual meeting, Princeton—Tunis Denise, Freehold, Pres., New Jersey Agricultural Society.

Nov. 19-22—New York State Experiment Station, Open House, Geneva—Dr. A. J. Heinicke, Station Director, Geneva.

Nov. 30—South Carolina Fresh Fruit and Vegetable Association, Wade Hampton Hotel, Columbia—Tom Witherspoon, Sec'y, Columbia State Farmers Market, Columbia.

Nov. 30-Dec. 3—Entomological Societies of America, Canada, and Ontario First Joint Meeting, Sheraton-Cadillac Hotel, Detroit, Mich.—Arnold Mallis, Gulf Research & Development Co., P.O. Drawer 2038, Pittsburgh 30, Pa.

Dec. 3-4—8th Annual Ohio Potato Growers' Short Course, Ohio Agricultural Experiment Station, Wooster.

Dec. 5—National Onion Association annual meeting, Hotel Sherman, Chicago—Jack Rose, Sec'y, Box 747, East Lansing, Mich.

Dec. 6-10—National Junior Vegetable Growers Association convention, Roosevelt Hotel, Washington, D.C.—Grant Snyder, National Chairman, French Hall, University of Massachusetts, Amherst.

Dec. 7-9—Washington State Horticultural Association annual meeting, Wenatchee—John C. Snyder, Sec'y, Pullman, Wash.

Dec. 7-10—Vegetable Growers Association of America annual convention, Dennis and Shelburne Hotels, Atlantic City, N.J.—R. M. Frederick, Exec. Sec'y, 528 Mills Bldg., 17th St. and Pennsylvania Ave., N.W., Washington 6, D.C.

Dec. 10-11—Iowa State Vegetable Growers' Association's 46th annual convention, Hotel Hanford, Mason City—C. L. Fitch, Sec'y, P.O. Box 421 Station A, Ames.

Jan. 13-16—Maryland Vegetable Growers Association annual meeting, held during Maryland Farm Bureau and affiliated organizations meetings, Lord Baltimore Hotel, Baltimore—Herman Hunter, Sec'y, Extension Service, University of Maryland, College Park.

Jan. 25-30—New Jersey Farmers Week, Trenton.

Feb. 1-3—Ohio Vegetable and Potato Growers Association annual meeting, Neil House, Columbus—E. C. Wittmeyer, Sec'y, 1827 Neil Ave., Columbus.

Feb. 1-4—United Fresh Fruit and Vegetable Association 56th annual convention, Conrad Hilton Hotel, Chicago—Association Headquarters, 777 14th St., N.W., Washington 5, D.C.

Feb. 3-5—Ohio State Horticultural Society annual meeting, Neil House, Columbus—C. W. Ellwood, Sec'y, Rt. 2, Wooster.

April 14-15—2nd Western Conference on Post Harvest Physiology and Biochemistry, University of California, Davis—Public Service Office, Univ. of Calif., Davis.

300 SACKS PER ACRE

(Continued from page 9)

will wait until tomorrow or the next day."

All of Clinger's farm is irrigated by flooding. The length of run is a controversial subject. Clinger has one field which is 100 rods long. For years the extension service and Soil Conservation Service personnel have argued with him to put a cross ditch in this field. He runs the water through in about four hours and waters the entire field of 47 acres in two days of daytime irrigating. Later in the season when the vines fill in the row, it takes one to two hours longer to irrigate.

This length of run is extraordinary, but there is a hardpan about 2½ feet deep. Large heads of water can be turned into the rows and because of the hardpan, the potatoes at the head of the patch are not overirrigated while the water is running through the rows.

For the last three years Clinger has contracted his entire crop of potatoes to the R. T. French processing company in Shelley. The potatoes are sold on a field-run basis. He obtained 300 sacks per acre which graded 75% No. 1's. The contract price is \$1.00 per cwt for 50% No. 1's, and for every 1% over 55% grade he gets an additional 1% per cwt. It has paid him to produce quality as well as quantity.

The last two years he started digging on September 18. However, this date is changed according to maturity. Usually a heavy frost the first part of September kills the potato vines. If no frost occurs the vines are beat off with a roto beater (Olson Roto Beater Co., Boise, Idaho) about two weeks before digging, to allow the potatoes to ripen. The potatoes are harvested with a two-row Forbes potato combine (Forbes Mfg. Co., Idaho Falls) which puts the potatoes into a bulk truck. With his bulk equipment Clinger can harvest at the rate of 2430 sacks per day. His trucks, which hold about 14,000 pounds, can be loaded in about 25 minutes. Three Internationals haul the potatoes to the processing plant in town. Harvest is usually completed in 14 to 15 days.

Clinger was the first president of Idaho Potato Producers Organization when it was formed in 1949, and he has served as a director ever since. He also served two years on National Potato Council. He has been one of the supervisors of North Bingham Soil Conservation District since 1949, and at present is chairman of the board of directors.

THE END.



**Real seed experts
work with crops
in the fields,**

SAYS FRED ROHNERT



As president of the Waldo Rohnert Co., Fred Rohnert is no stranger to his company's fields of lettuce, beets, celery and other row crops. "Our breeders and scientists spend considerable time growing extensive field trials for new seeds and becoming familiar with your problems as a grower. And they personally select the best vegetables grown for further breeding toward the development of ever bigger and better crops! Look for the field expert's seed—SRS seed grown by vegetable seed specialists."

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WRITE FOR NAME OF NEAREST SUPPLIER



Double Duty

A new soil tester has just come to my attention that not only measures the acidity or pH value of the soil, but the moisture content too. The new tester is $6\frac{1}{2}$ inches long and weighs only 8 ounces. You don't have to be a chemical engineer to operate it, and simple spot checks can be made in any given area. You obtain your moisture reading by simply pressing a button on the lower part of the meter. This may be just what you are looking for to insure greater profits next year. Why not write to Kel Engineering & Equipment Co., Dept. VG1, P.O. Box 744, New Brunswick, N.J., for further details?



Profit Sizer

Growers in Michigan are using a new sizer which streamlines their operation materially. Called the "Multi-Sizer," it lives up to all its advance billing. It has been found ideal for sizing cucumbers, sweetpotatoes, onions, and similar vegetables. Sizes are adjustable from 0 inch to 5 inches



with minute adjustment. With a machine like this, you can easily run a high volume operation at low cost. Milt Murray of Lobe Pump and Machinery Co., Gasport, N.Y., would be happy to give you all the details.

Scare 'em

Here's a gadget that produces fully automatic, harmless, thunderclap explosions that scare away not only birds, but squirrels, deer, rabbits, and other wild life from your valuable vegetable crops. The "Scare-Away" will protect up to 20 acres depending on wind conditions, infestation, etc. It can be regulated to fire twice a minute up to 30-minute intervals, and the explosions are loud and irregular making it hard for animals or birds to become accustomed to it. This heavy duty, harmless but effective unit op-

New for You



erates inexpensively on carbide and water. Reed-Joseph Company, Greenville, Miss., can tell you all about it.

Economy Plus

Growers all over the country are really enthusiastic about the new Economy Bagger. They say it eliminates bruising and can bag 100 bushels an hour. A great many of them have been using it in their roadside stand operations and find it excellent for potatoes, peppers, onions, cucumbers—or anything that rolls! It is attractively priced, and anyone can operate it. Why not let Bill Aepple of Wisconsin Orchard Supply Company, Dept. BV, Oconomowoc, Wis., tell you all about it?



Meet "Junior"

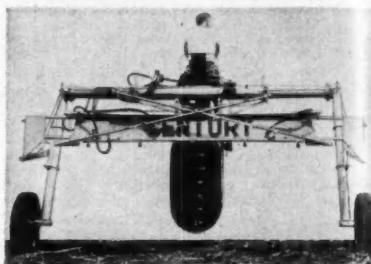
There has been a new addition to the Campbell-Hausfeld Tankmobile line. The new low-cost unit known as "Tankmobile Jr." offers efficiency and dependability usually found only in higher priced equipment. Models are available with a $\frac{1}{2}$ HP capacitor motor or a $\frac{1}{3}$ HP split phase motor. The capacitor motor has an automatic



pressure switch to control tank pressure 60/80 psi by running the motor only when needed. An air chuck and 15 feet of $\frac{1}{4}$ -inch air hose are standard equipment. This should be a "must" for your lubrication, fumigating, and disinfecting operations. Ask C. E. Small of Campbell-Hausfeld Co., Harrison, Ohio, to tell you more about it.

Adjustable Sprayers

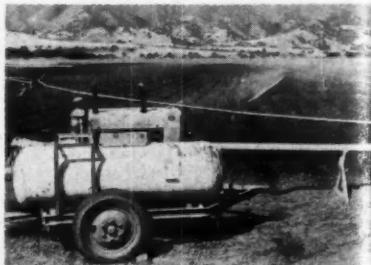
I've just been watching a demonstration of a new attachment that permits spacing the wheels of a high clearance self-propelled sprayer from 72 to 150 inches. High clearance



equipment can now be used on unlevel ground or on a wide seedbed. This device can be added to any Century unit in the field or purchased as original equipment. The telescoping attachment consists of 5-inch heavy wall steel tubes which slide into the rear frame of the carrier. Why not ask C. D. Davenport of Century Engineering Corporation, Cedar Rapids, Iowa, to send you details? He will be delighted to hear from you.

Automatic Rain

Bud Amble out near Salinas, Calif., has solved his irrigation problem, and I thought maybe you would be interested in hearing about it. He waters 500 acres of lettuce, carrots, and beets



with two pumps driven by International U-450 power units. He gets his water from a network of underground mains. Eight thousand feet of sprinkler lines are used with each pump. The International engine, pump, and 250-gallon LP gas tank form one trailer-mounted unit and this is easily moved from one location to another. Joe Pettit of International Harvester Co., Chicago 1, Ill., will furnish you with information.

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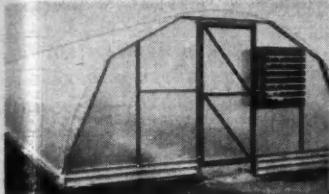
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Sworn to an
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OCTOBER, 1959

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Rough Brothers PLASTIC HOUSE**



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POLYETHYLENE FILM.
1½ mil., black, in 1000-ft. rolls, 3 ft. wide, \$20.40;
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4 mil., natural, in 100-ft. rolls, 6 ft. wide, \$6.00;
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\$25.20; 16 ft. wide, \$28.80; 20 ft. wide, \$36.00; 24 ft.
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10 per cent discount on orders over \$24.00.
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AMERICAN VEGETABLE GROWER, published monthly at Willoughby, Ohio, for October 1, 1958.

1. The names and addresses of the publisher, editor, managing editor and business managers are Publisher, American Fruit Grower Publishing Company, Willoughby, Ohio; Editor, R. T. Meister, Willoughby, Ohio; Managing Editor, None; Business Manager, Edward L. Meister, Willoughby, Ohio.

2. The owner is: (If owned by a corporation, its name and address must be stated and also immediately thereafter the names and addresses of stockholders owning or holding 1 percent or more of total amount of stock. If not owned by a corporation, the names and addresses of the individual owners must be given. If owned by a partnership or other unincorporated firm, its name and address, as well as that of each individual member, must be given.)

American Fruit Grower Publishing Company, Willoughby, Ohio; E. G. K. Meister, Willoughby, Ohio; E. L. Meister, Willoughby, Ohio; R. T. Meister, Willoughby, Ohio.

3. The known bondholders, mortgagees, and other security holders owning or holding 1 percent or more of total amount of bonds, mortgages, or other securities are: (If there are none, so state.) None.

4. Paragraphs 2 and 3 include, in cases where the stockholder or security holder appears upon the books of the company under a name other than his own, the name of the person or other fiduciary relation, the names of the persons or corporation for whom each trustee is acting; also the statements in the two paragraphs show the affiant's full knowledge and belief as to the character of such security holders, under which the stockholder or security holder or holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner.

EDWARD L. MEISTER,
Business Manager

Swear to and subscribed before me this 25th day of September 1958.

(Seal) **E. P. JEANGUENAT**, Notary Public.
(My commission expires Sept. 17, 1962)

NJVGA NEWS

Winners Win Trip

WINNERS in Mississippi's 4-H Vegetable Club contests are already making plans for the part they will play in the national contests to be held during the annual convention of National Junior Vegetable Growers Association. Dates and meeting place of the national convention are December 6-10 at Roosevelt Hotel, Washington, D. C.

Mississippi's 4-H Club Congress was held at Mississippi State University in July. Forty contestants participated in the Judging Contest.

The team that placed first—Anne Hogue, Betty Latham, and Ouida Jo Traham, from Bolivar County—will attend the NJVGA convention under the auspices of Chilean Nitrate Educational Bureau and will compete in the 4-H division of the NJVGA Judging Contest. Their coach, Mrs. Neva C. Lovell, assistant home demonstration agent, will accompany the team.

The Vegetable and Fruit Demonstration Contest had 18 individual and two team demonstrations. Peggy Hussey from Lee County won first place in the individual demonstration. She was coached by Mrs. Margaret Nichols, assistant home demonstration agent, Tupelo.

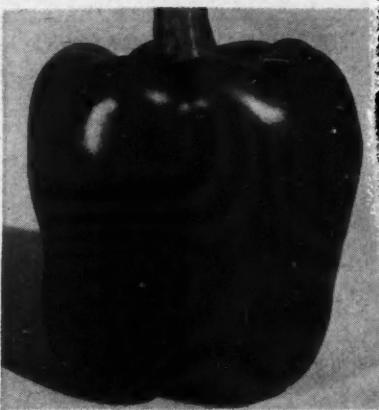
First place team was composed of Mary W. Lann and Dale Cole from Monroe County who were coached by Mrs. Lois Varnell, assistant home demonstration agent, Aberdeen.

These contestants will represent Mississippi in the National Demonstration Contests with trip expenses paid by F. W. Woolworth Company and Kroger Company, sponsors of the state contest.

The expenses of the coaches to the NJVGA Convention will be paid by Mississippi Extension Service.



Officers of Mississippi Chapter of NJVGA for 1959-60, elected during the state's 4-H Club Congress, are (front) John Liggett, president; Mary Nell Collins, vice-president; Mary Jeanne Liggett, secretary, all of Hinds County; Betty Latham, northwest district director; (back) Mary W. Lann, northeast district director; Charles Taylor, southwest district director; Annie Rene Bishop, southeast district director; extension horticulturist Chesley Hines, NJVGA state leader.



Pepper profits are more sure with California seed!

*Says Leigh Abernethy,
Manager, Quality Control*



"That's because California's rain-free summer climate produces unusually disease-free peppers, like our popular mosaic resistant Yolo Wonder," says Leigh Abernethy, Quality Control Manager for the Clarence Brown Co. "And when you select pepper seed that's also been intensively selected for vigor, uniformity and yield of top market fruits, you're pretty sure to end up with the most profitable crop you've ever grown! Ask your supplier for Clarence Brown pepper seed . . . sold under the bright blue SRS label."

CLARENCE BROWN CO.
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Leafmold (Mildew) and wilt resistant strains for your greenhouse planting program. Developed by Missouri's top tomato breeders. Tuckcross V, O, M, or W; a strain ideal for your region, adapted to glass or plastic.

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23' x 80' Size.
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Popular TROX Greenhouse costs less than 1/5 price of glass house. Shipped ready to assemble, complete with everything needed for erection above foundation. Complete plans, instructions furnished. Parts plainly marked so anyone can erect. 23' x 80' TROX HOUSE can be assembled ready for use in 25 man hours. Write for literature.

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Only 25¢ a word for one-time insertion; 20¢ a word for two-time insertion; 15¢ a word for four-time insertion—CASH WITH ORDER. Count each initial and whole number as one word. Copy must be in 15th of second month preceding date of issue. ADDRESS AMERICAN VEGETABLE GROWER, Willoughby, Ohio.

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Answering Your QUESTIONS

Don't let your questions go unanswered. Whether large or small, send them with a four-cent stamp for early reply to Questions Editor, AMERICAN VEGETABLE GROWER, Willoughby, Ohio.

FALL SNAP BEAN TESTS
I understand there were vegetable trials held in our state and am interested to know which fall snap bean varieties came out on top.—New Mexico.

Of the 13 varieties of snap beans planted July 31, 1958, in the New Mexico test plots, Contender and Topcrop were rated highest.

CUCURBIT PROBLEM

My pickles and melons do not seem to be diseased but on sunny days the plants wilt and then perk up toward evening. There is no lack of moisture. The melon vines died before the crop ripened and the pickle crop had a very short season. On pulling up the vines, I found the main root to be dark brown and there were almost no feeder roots. What causes this condition?—Massachusetts.

It appears that your problem is excessive salts in the soil. Perhaps you used an excessive amount of fertilizer, or a highly concentrated fertilizer, or placed a band of fertilizer around the hill to an amount sufficient to prevent the development of feeder roots and to discolor the main tap root.

You might also check your soil acidity. Cucumbers and melons do best in a soil with a pH of 6 to 6.5. An acid soil will retard root development.

POTATO VARIETIES

What newer potato varieties are recommended for planting in my area and what chipping varieties should I try?—Iowa.

According to Dr. L. C. Peirce, vegetable crops specialist at Iowa State College, Ames, tests have been conducted on Norland, a new red-skinned potato, and Tawa, a new white-skinned type, which indicate that they might give adequate results in southeastern Iowa. However, the climate of the area is far from ideal for high productivity in potatoes. For chipping, Cobbler and Kennebec have demonstrated high quality in areas where they have been grown commercially. Of the two, Cobbler may be better suited to southeastern Iowa.

LIMA BEAN PROBLEM

I am having trouble with my Fordhook lima beans. They come up through the ground with the bean on top of the stem and on some of the stems the leaves do not want to form. Can you throw any light on this problem?—Pennsylvania.

The difficulty with your lima beans is generally referred to as "smokehead" or "bulldog." This condition is usually caused by some kind of injury to the growing points of the young plant. It is a result of injury to seed when threshed or handled roughly, to maggot injury, or to emergence of beans through a hard soil crust.

J. O. Dutt, extension vegetable specialist at Pennsylvania State University, says that this condition can be eliminated to some extent by treating seed to prevent injury by seed corn maggots and by avoiding soil which crusts badly. Also, avoid planting the beans too deep.

WEED BURNER

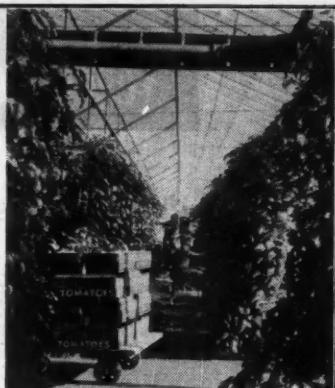
Where can I purchase the kerosene-operated weed burner pictured in the Greenhouse Crops section of your March issue?—Louisiana

From Vaughan's Seed Co., 601 W. Jackson Blvd., Chicago 6, Ill.

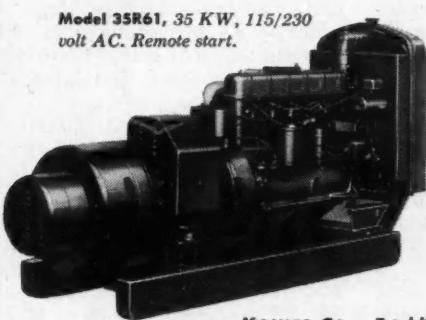
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Where There's Fire, There's Light

IT is always heartening to see the progress taking place in teaching and training students in vegetable crops for jobs later in the vegetable industry. The flow of talent through schools and colleges in a large measure makes possible a strong, dynamic vegetable industry. It insures that research, extension, supply, and production will be in well-trained, reliable hands.

The story from Purdue on page 14 tells what one of the leading agricultural colleges is doing to adapt its educational and training program to the changing needs of horticulture. The new curriculum will be of greater interest to students and will give them a stronger background for solving problems after they graduate.

John MacGillivray, who teaches an introductory vegetable crops course at the University of California at Davis, pointed out recently that "a student is a fire to be lighted, not a vessel to be filled." To light the fire, the course must be made interesting. To do this, he suggests organizing the course on a thermo-classification basis.

He teaches his students that there are three groups of cool-season crops separated on the basis of their growth at certain average monthly temperatures and the effect of high and low temperatures. There are two groups of warm-season crops separated the same way.

He further points out that with cool-season crops we eat a vegetative part and with warm-season crops we eat the fruits, with two major exceptions—peas, a fruit, are a cool-season crop, and sweetpotatoes, a root, are a warm-season crop.

A knowledge of the thermo-classification is helpful in the following ways:

1) If the average monthly temperatures are known for an area, it permits a fairly accurate estimate of what crops can be grown, and when.

2) Most cool-season crops of small to medium size are shallow rooted. Large plants and perennials are deep-rooted crops. Depth of rooting affects both irrigation and fertilizer practice.

3) Response to length of day is concerned primarily with annual cool-season crops, and the flowering of some is affected also by moderately low temperatures in their early growth.

4) Premature seeding is concerned primarily with biennial cool-season crops. About the same temperature in warm-season crops produces chilling injury in the harvested portion.

5) Warm-season fruits, except sweet corn, are affected by chilling temperatures of 40 to 60° F.

6) Pollination of fruits may be affected by too high or too low air temperatures.

7) Storage temperatures are of particular importance in areas from which crops are shipped to eastern markets. All cool-season crops except white potatoes may be stored at 32 to 33° F.

The warm-season crops are not so easy to remember, since there are five groups. Sweet corn is stored near 32° F, like a cool-season crop. Beans and melons are stored at 34 to 40° F; peppers, ripe tomatoes, and cucumbers at 40 to 50° F; pumpkins, squashes, and sweetpotatoes at 50 to 55° F; and green tomatoes at 55 to 70° F.

There may be minor inaccuracies in this grouping, but it helps the student to remember the general storage temperatures for the important vegetables.

MacGillivray points out that this method of systematic organization makes it possible to give a seed-catalog description of a vegetable and get recommendations from the class on: 1) cool- or warm-season crop, 2) fertilizer need at Davis, 3) depth of root-

ing, 4) response to photoperiod, 5) effect of chilling temperatures, 6) whether affected by premature seeding, 7) irrigation practice, and 8) proper storage temperature.

Organizing a course on this basis makes it easier to understand and at the same time reveals relationships that may fire the imagination of the student.

Millions of Flakes

ARRANGEMENTS are complete for construction of a new instant whipped potato flakes plant in Grafton, N.D., Theodore O. Hofman, president of Borden Foods Company, has announced.

The new plant will be capable of turning out 7 million pounds of instant whipped potato flakes yearly. The plant site, in the heart of the

QUOTE-OF-THE-MONTH

*Once more the liberal year laughs out
O'er richer stores than gems or gold!
Once more with harvest-song and shout
Is Nature's bloodless triumph told.*

—John Greenleaf Whittier

Red River Valley potato area, was acquired from the Great Northern Railroad.

The new dehydrated mashed potato product was developed by USDA. Just last May the Institute of Food Technologists at its annual meeting presented its Achievement Award to the Eastern Utilization Research and Development Division of ARS, Wyndmoor, Pa., for developing the new product.

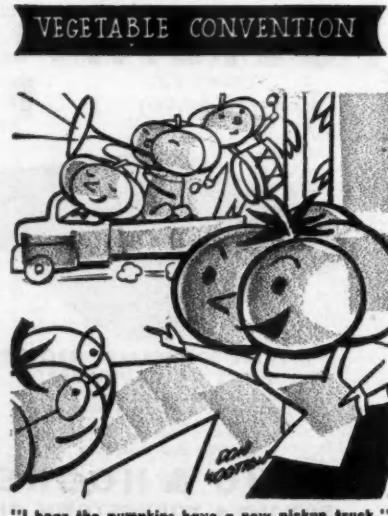
Potato flakes are already being commercially produced in seven plants whose production this season should reach 25 million pounds.

Americans have been eating fewer and fewer potatoes because of the time and labor involved in preparing them. Processed potato products have done much in recent years to reverse this trend, and the new potato flakes should do a great deal more to restore the potato to its former place of prominence.

Coming Next Month

- VGAA's Convention Program
- Growing Leaf and Bibb Lettuce Under Glass
- Farm Wages and Social Security

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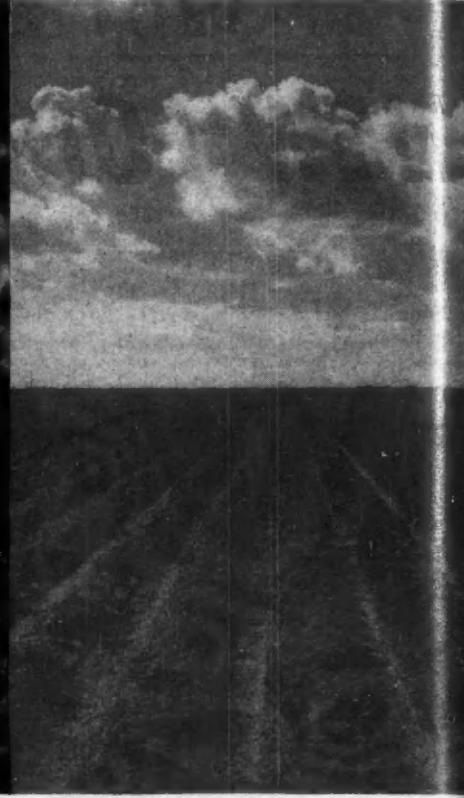
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